

VERIFICATION OF TRANSLATION

I, the undersigned, hereby declare:

That my name and address are as stated below under my signature;

That I am conversant with the English and German languages; and

That the attached translation is a true translation prepared by me of the accompanying International Application No. PCT/CH02/00019, filed on January 11, 2002.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any U.S. patent issued thereon.

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(signature)

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Resealable Packaging Bag

The invention relates to a resealable packaging bag made of a flexible material and having an opening on the top.

Resealable packaging bags are known in many different embodiments. Known also already are packaging bags produced mainly from flat webs, which bags are sealed through a flap provided with a self-adhesive layer. Especially when at least the outer layer of the packaging bag is made of plastic, on which the adhesive does not adhere all that well, it is no problem to open and seal again such a bag repeatedly. Bags with side gussets are sealed again after the first opening in particular by folding over the opening edge.

The invention has as its object to propose a resealable packaging bag which can be produced in the simplest way and at minimal cost.

The object is achieved through a packaging bag wherein non-detachably fixed to one side of the bag is a backing, detachably fixed to the backing is a section made of a flexible material provided with a self-adhesive layer, and a portion of the backing and a portion of the section project beyond the opening edge of the bag.

The advantages of this solution according to the invention are in particular that the bag can be produced from any desired material, including paper, and that the backing with the self-adhesive section can be a commercially obtainable self-adhesive label.

According to a special embodiment of the invention, the backing has a separation line which is designed as a weakened line or divides the backing into two parts and which extends at least approximately parallel to the opening edge. This facilitates the taking off of the portion of the backing projecting beyond the bag edge when the bag is sealed for the first time.

According to another embodiment of the invention, the backing and/or the section have a recess which extends from the edge of the backing

and the vertex of which lies in the region of the separation line. This design prevents an undesired tearing off of the self-adhesive section from the part non-detachably connected to the bag when the bag is sealed for the first time.

According to a further, preferred embodiment of the invention, the
5 flexible material of the packaging bag has at least one layer of paper which is located on the outside of the packaging bag or it is made entirely of paper. According to another embodiment of the invention, the bag can have side gussets.

If the packaging bag is supposed to be tight after sealing for the first
10 time, its opening edge can be designed as a sealing edge, according to a further embodiment of the invention.

Special embodiments of the invention will be explained more closely in the following, by way of example, with reference to the attached drawing.

Shown are

15 Figure 1 a packaging bag according to a first embodiment of the invention in a view in perspective of its rear side,

Figure 2 the bag according to the first embodiment seen from the front, before sealing,

20 Figure 3 the bag according to the first embodiment, seen from the front, after closing,

Figure 4 the bag according to the first embodiment, seen from the rear, after reopening,

Figure 5 a packaging bag according to a second embodiment of the invention in a view in perspective of its front side,

25 Figure 6 the bag according to Figure 5 during opening for the first time, and

Figures 7 and 8 each a section from a strip of a backing material with labels for packaging bags according to the invention.

Involved in the case of the bags shown in Figures 1 to 6 are so-called block bottom bags. The invention is not limited to block bottom bags, 5 however, but includes any type of packaging bags made of flexible material. The packaging bag shown in Figures 1 to 4 can be manufactured out of paper, for instance, which is provided if necessary with a thin layer of plastic on the inside of the bag, ensuring a certain tightness and allowing the joining of the material through sealing. The bag has a back side 1 and a front side 2, and its 10 lateral portions preferably have side gussets 3 in a known way. Formed at the lower end of the bag is a floor 4 and at the upper end there is an opening 5, through which the bag is filled or emptied.

A backing 6 is permanently fixed, e.g. glued or sealed, on the back side 1 near the opening edge of the bag and projecting beyond it. The backing 15 6 is divided by a separation line 7 into two parts 8 and 9, the separation line 7 being aligned exactly with the bag edge in the example shown. The separation line 7 can penetrate the material of the backing 6 completely or it can be designed as a weakened line in a known way, which does not completely penetrate the material of the backing. Adhered to the backing 6 is a section 20 made out of a flexible material provided with a self-adhesive layer. According to an especially preferred embodiment of the invention, this section is a commercially obtainable self-adhesive label and is therefore designated as label 10 in the following description. The backing 6 is provided on its side turned toward the label 10 with a coating enabling the separation of the label 25 10, a so-called "release coating."

Figure 1 shows the packaging bag, as it is supplied by the packaging producer and is delivered, for example, to a foodstuff processing company, which fills the bag for the first time. Figure 2 shows the same bag, set up and ready to be filled, the bag in this figure being rotated by 180° 30 compared to the position shown in Figure 1, so that the opening 5 is well visible. For preparation of the sealing for the first time after filling, the portion 8 of the backing 6 projecting beyond the bag edge is pulled off, which is

facilitated by the separation line 7. In trials it has happened that during this pulling off the label has been unintentionally torn off the part 9 of the backing that is firmly connected to the bag, in particular when the direction in which the portion 8 was pulled has a component running from the front side 2 toward the back side 1 of the bag. In order to prevent this, it has proven advantageous if there is a recess 11 in the region of the separation line 7 in the backing 6 and/or in the label 10. This recess can be round, as shown, but it can also have a pointed shape, such as known tear notches have. In a next step, the part of the label 10 protruding over the bag edge is bent over and the self-adhesive layer of the label 10 which has become exposed through the pulling off of the portion 8 of the backing 10 is stuck onto the front side 2 of the bag. The bag closed in such a way, as is shown in Figure 3, can now be delivered to the consumer.

To remove the contents, the packaging bag can be opened in a simple way in that the label 10 on the back side 1 of the bag is detached from part 9 of the backing 6 firmly connected to the backing, which, as mentioned, has a release coating for this purpose. Figure 4 shows the packaging bag after opening by the consumer, the bag in Figure 4 being again rotated by 180° with respect to the depiction in Figure 3. If the consumer wants to seal the bag again, he simply represses the part of the label projecting over the bag edge, in the depiction according to Figure 4, onto the part 9 of the backing situated on the opposite bag edge. It goes without saying that this step can be repeated almost as many times as desired.

The packaging bag according to the first embodiment example described above cannot be tightly sealed and of course is therefore not suitable, for example, for contents having fluid components. A preferred use of this bag is in packaging foodstuffs, such as sandwiches, which are intended to be given to airline passengers, for instance.

The second embodiment example of the invention, illustrated in Figures 5 and 6, shows a packaging bag, which is tight after sealing for the first time. To this end, this bag is sealed by means of a sealing edge 12 in a known way when being filled for the first time. The backing 6 is fixed on the back side

1 of this bags in such a way that it does not adhere to the sealing edge 12. The opening of this bag for the first time can thus be carried out simply through pulling off the sealing edge 12, which can be facilitated by a tear-off notch 13 and/or by a weakened line (not shown) disposed in the packaging material. If 5 the user wants to close again the bag thus opened, he detaches the portion 8 of the backing 6 from the label 10, as is indicated in Figure 6, places the protruding part of the label over the bag opening 5 and sticks it on the front side 2 of the bag. Upon second opening of this bag, the user will pull off the 10 label 10 from the part 9 of the backing 6, which part is provided with a "release coating" and is disposed on the back side 1 of the bag, as has been described in the foregoing in connection with Figure 4.

Finally, Figures 7 and 8 each show a section from a strip of a backing material with labels for a packaging bag according to the invention. Used in both cases for manufacture of the packaging bag according to the 15 invention is a backing 6 in the form of a continuous web, on which the labels 10 are stuck on in a row. The separation lines 7 and the recesses 11 can also be already present in this strip. The strip according to Figure 7 is intended for producing bags from a flexible tubing, the opening edges of the bag running transversely to the direction of manufacture. A strip according to Figure 8 is 20 used for producing bags out of one or more webs, in which the opening edge in each case is situated parallel to the direction of the web, for instance at the edge of the web.

The label 10 does not need to have the substantially rectangular shape shown in the previously described embodiment examples, but can be of 25 any shape. It can also be provided with one or more tabs, for example, which facilitate opening. Furthermore the label can be made of any material, and can be clear or transparent, for instance. The label can be printed, for example with indications of its purpose and/or instructions for use. Of course the label 30 can also contain in a known way indications about the expiration date of the packaging contents. The same applies for the backing 6. For example, the part 8 to be removed can have indications of use and/or a tab. Printed, under the label 10, on the part 9 of the backing 6 remaining on the bag can be

instructions for re-sealing of the bag, so that these instructions do not appear until after opening the bag.